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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,647	01/10/2002	Ashok Gadgil	WATERHE.016A	6043
20995	7590	02/20/2004	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			KALIVODA, CHRISTOPHER M	
			ART UNIT	PAPER NUMBER
			2881	

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/043,647	Applicant(s) GADGIL ET AL.	
	Examiner Christopher M. Kalivoda	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

On November 12, 2003, Applicant filed an amendment changing only the specification. The changes are approved. Accordingly, the previous objection to the specification is withdrawn.

Response to Arguments

Applicant's arguments filed November 12, 2003 have been fully considered but they are not persuasive. Regarding claims 1, 8 and 9, "as claimed", the examiner respectively disagrees. Gadgil et al., U.S. Patent No. 7,780,860 does anticipate these claims. Gadgil et al. teaches a maximum throughput of 15 liters per minute (col 12, lines 33-34). This means it is capable of 1, 2, 3, ... 15 liters per minute. As currently claimed, the only limitation is 8 liters per minute or less which falls in the above range.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both inventions are tailored towards purifying water. In addition, Kool et al. teach water treatment in the

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home (tap) so one of ordinary skill in the art would consider purifying tap water. As such, the invention would need to be scaled down for home use.

Regarding claims 4-7, examiner respectively disagrees and it is proper to combine the references under 35 U.S.C. 103(a).

Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Gadgil, et al. U.S. Patent 5,780,860. Regarding claim 1, Gadgil, et al. teach an ultraviolet water disinfecter comprising:

- a. a feed water delivery system (see column 19, lines 1-15);
- b. an inlet chamber housing at least a portion of the feed water delivery system (see column 19, line 16-17 and figure 1, ref signs 21 and 31);
- c. a baffle wall downstream of the feed water delivery system, the baffle wall having a plurality of spaced perforations (see column 19, lines 19-21 and column 22, lines 5-9 and figure 1, ref sign 37);
- d. an air suspended UV lamp (see column 21, lines 14-19 and figure 1, ref sign 53); and

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e. a treatment chamber beneath the UV lamp downstream of the baffle wall, wherein water is driven by gravity at a flow rate of 8 liters per minute or less (see column 12, line 33-34).

Regarding claim 8, Gadgil, et al. teaches the UV system as described in claim 1 above. Since the inventors anticipate a system with a max throughput of 15 L/min, they also anticipate a range of 4 L/min or less (see column 12, line 33-34).

Regarding claim 9, Gadgil, et al. teaches the UV system as described in claim 1 above. Since the inventors anticipate a system with a max throughput of 15 L/min, they also anticipate a range of 1-3 L/min or less (see column 12, line 33-34).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gadgil, et al. U.S. Patent 5,780,860 in view of Kool, et al. U.S. Patent 6,533,930. Regarding claim 2, Gadgil, et al. teaches the limitations of claim 1 as described above.

However, the reference is silent with respect to adapting the feed water delivery system to connect to a household tap.

Kool, et al. teaches the use of water treatment stations for use in the home or office. In addition, water can be either fed directly from a faucet or routed through the station prior to being dispensed from the faucet (see column 1, lines 22-29).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Gadgil, et al. to adapt the water delivery system to be able to connect to a household tap as the source of water.

The motivation for such an improvement would be to remove contaminants found in tap water (see column 1, line 10-13).

Claims 3 and 10 –16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gadgil, et al. U.S. Patent 5,780,860. Regarding claim 3, Gadgil, et al. teaches the limitations of claim 1 as described above. In addition, Gadgil, et al. describes the use of an outer shell adapted to collect water that overflows (see column 19, lines 45-55).

However, the reference is silent with respect to a notch in the inlet chamber adapted to allow excess water to overflow.

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Gadgil, et al describes the use of notches (evacuation cutouts) on walls for water overflow (see column 12, line 34-39).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the inlet chamber to include notches adapted to allow excess water to overflow.

The motivation for such an improvement would be to prevent excess water from flooding the internal workings (see column 12, lines 39-42).

Regarding claim 10, Gadgil, et al. teaches the limitations of claim 1 as described above.

However, the reference is silent with respect to the disinfectant having a length of about 48 cm or less, a width of about 19.5 cm or less, and a height of about 15.75 cm or less.

It is well known in the art to scale the size of components (See MPEP 2144.04; In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976)).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to scale the disinfectant to a smaller size.

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The motivation for making the disinfectant smaller or larger would be to be able to install the system in various locations and have the flexibility to accommodate different sizes.

Regarding claim 11, Gadgil, et al. teaches the limitations of claim 1 as described above.

However, the reference is silent with respect to the disinfectant having a length of about 40 cm or less, a width of about 16.5 cm or less, and a height of about 13.125 cm or less.

It is well known in the art to scale the size of components (See MPEP 2144.04; In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976)).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to scale the disinfectant to a smaller size.

The motivation for making the disinfectant smaller or larger would be to be able to install the system in various locations and have the flexibility to accommodate different sizes.

Regarding claim 12, Gadgil, et al. teaches the limitations of claim 1 as described above.

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However, the reference is silent with respect to the disinfecter having a length within a range of about 35.2 – 28.8 cm, a width within a range of about 14.3 – 11.7 cm, and a height within a range of about 11.55 – 9.45 cm.

It is well known in the art to scale the size of components (See MPEP 2144.04; In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976)).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to scale the disinfecter to a smaller size.

The motivation for making the disinfecter smaller or larger would be to be able to install the system in various locations and have the flexibility to accommodate different sizes.

Regarding claim 13, Gadgil, et al. teach an ultraviolet water disinfecter comprising:

- a. a feed water delivery system (see column 19, lines 1-15);
- b. an inlet chamber housing at least a portion of the feed water delivery system (see column 19, line 16-17 and figure 1, ref signs 21 and 31);
- c. a baffle wall downstream of the feed water delivery system, the baffle wall having a plurality of spaced perforations (see column 19, lines 19-21 and column 22, lines 5-9 and figure 1, ref sign 37);

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d. a treatment chamber beneath the UV lamp downstream of the baffle wall, wherein water is driven by gravity at a flow rate of 8 liters per minute or less (see column 12, line 33-34).

However, the reference is silent with respect to the specific use of a UV lamp using 20 Watts of input power or less.

Gadgil, et al. indicates that very low energy lamps can be used (see column 3, lines 45-48). It is well known in the art to optimize within prior art conditions or perform routine experimentation (See MPEP 2144.04; In re Aller, 220 F.2d 454, 105 USPQ 233,235).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a UV lamp that uses less than about 20 Watts of input power.

The motivation for using low power UV lamps would be reduce operating costs and increase bulb longevity.

Regarding claim 14, Gadgil, et al. teaches the UV system as described in claim 13 above. Since the inventors anticipate a system with a max throughput of 15 L/min, they also anticipate a rate of 8 L/min or less (see column 12, line 33-34).

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Regarding claim 15, Gadgil, et al. teaches the UV system as described in claim 13 above. In addition, the inventors describe the use of a low-pressure mercury lamp (see column 24, line 58-61).

Regarding claim 16, Gadgil, et al. teaches the UV system as described in claim 13 above. However, the reference is silent with respect to the disinfectant having a length of about 40 cm or less, a width of about 16.25 cm or less, and a height of about 13.125 cm or less.

It is well known in the art to scale the size of components (See MPEP 2144.04; In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976)).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to scale the disinfectant to a smaller size.

The motivation for making the disinfectant smaller or larger would be to be able to install the system in various locations and have the flexibility to accommodate different sizes.

Claims 4 - 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gadgil, et al. U.S. Patent 5,780,860 in view of Cryptosporidium Inactivation By Low Pressure UV In a Water Disinfection Device by Drescher, Greene, and Gadgil (referred

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to as Drescher, et al.). Regarding claim 4, Gadgil, et al. teaches the limitations of claim 1 as described above.

However, the reference is silent with respect to narrowband UV radiation.

Drescher, et al. teaches the use of narrowband UV in a water purification system (see page 1 abstract).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the use of narrowband UV radiation in the invention of Gadgil, et al.

The motivation for the use of narrowband UV radiation would be to treat the water possibly containing *Cryptosporidium parvum* as well as most bacteria and viruses (see page 8, second paragraph).

Regarding claim 5, Gadgil, et al. in view of Drescher, et al. teaches the limitations of claim 4 above.

However, the references are silent with respect to specific lamp power used.

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Gadgil, et al. indicates that very low energy lamps can be used (see column 3, lines 45-48). It is well known in the art to optimize within prior art conditions or perform routine experimentation (See MPEP 2144.04; In re Aller, 220 F.2d 454, 105 USPQ 233,235).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a UV lamp that uses less than about 25 Watts of input power.

The motivation for using low power UV lamps would be reduce operating costs and increase bulb longevity.

Regarding claim 6, Gadgil, et al. in view of Drescher, et al. teaches the limitations of claim 5 above.

However, the references are silent with respect to specific lamp power used.

Gadgil, et al. indicates that very low energy lamps can be used (see column 3, lines 45-48). It is well known in the art to optimize within prior art conditions or perform routine experimentation (See MPEP 2144.04; In re Aller, 220 F.2d 454, 105 USPQ 233,235).

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Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a UV lamp that uses less than about 20 Watts of input power.

The motivation for using low power UV lamps would be reduce operating costs and increase bulb longevity.

Regarding claim 7, Gadgil, et al. in view of Drescher, et al. teaches the limitations of claim 6 above.

However, the references are silent with respect to specific lamp power used.

Gadgil, et al. indicates that very low energy lamps can be used (see column 3, lines 45-48). It is well known in the art to optimize within prior art conditions or perform routine experimentation (See MPEP 2144.04; In re Aller, 220 F.2d 454, 105 USPQ 233,235).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use a UV lamp that uses about 8-15 Watts of input power.

The motivation for using low power UV lamps would be reduce operating costs and increase bulb longevity.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (571) 272-2476. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher M. Kalivoda
Art Unit 2881
February 11, 2004

Nikita Wells 02/17/04
NIKITA WELLS
PRIMARY EXAMINER